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IN THE CLAIMS

Please amend claims 1 and 3 as shown below, in which the changes are indicated with strikethrough for deleted terms and/or with underscoring for added terms. Also, please cancel claim 9 without prejudice, and without dedication or abandonment of the subject matter thereof. Still further, please add new claim 23 as shown below.

1. (Currently amended) A method for forming a coating film, comprising the steps of:
applying a raw material of a low dielectric constant onto a surface of a plate-like material to be treated;
reducing oxygen concentration in the atmosphere surrounding the plate-like material to be less than or equal to 1% before a surface temperature of said plate-like material to be treated rises to 200°C; thereafter
heating said plate-like material to be treated to a temperature greater than or equal to 400°C while maintaining the oxygen concentration in the atmosphere surrounding the plate-like material to be less than or equal to 1%; and then
maintaining continuing to maintain the oxygen content in the atmosphere to be less than or equal to 1% ~~until~~ while the surface temperature of said plate-like material to be treated ~~lowers is~~ lowered to at least 200°C;
said raw material of a low dielectric constant is an organic SOG having a carbon content of 5-25 atomic ~~weight~~ %.
2. (Previously amended) A method for forming a coating film as defined in claim 1,

wherein the oxygen concentration in the atmosphere is lowered to be less than or equal to 1% by purging with N₂.

3. (Currently amended) A method for forming a coating film as defined in claim 1, wherein said ~~method is~~ reducing, heating and continuing steps are conducted in one baking furnace, the baking furnace including a hot plate and a cool plate vertically spaced from each other, and elevator means for selectively moving the plate-like material to be treated relative to the hot and cool plates, wherein said baking furnace is used to heat and ~~to thereby~~ control the surface temperature of the plate-like material.

4. (Previously amended) A method for forming a coating film as defined in claim 1, wherein said coating film is an interlayer insulation film and is further processed by a damascene method.

5. (Previously amended) A method for forming a coating film as defined in claim 2, wherein said coating film is an interlayer insulation film and is further processed by by a damascene method.

6. (Previously amended) A method for forming a coating film as defined in claim 3, wherein said coating film is an interlayer insulation film and is further processed by a damascene method.

7. (Previously added) A method for forming a coating film as defined in claim 3, wherein said hot plate is disposed above said cool plate.

8. (Previously added) A method for forming a coating film as defined in claim 3, wherein said

levating means extends through said cool plate.

9. Cancelled

10. (Previously added) A method for forming a coating film as defined in claim 4, wherein said interlayer insulation film has a dielectric constant of 3.5.

11. (Previously added) A method for forming a coating film as defined in claim 5, wherein said interlayer insulation film has a dielectric constant of 3.5.

12. (Previously added) A method for forming a coating film as defined in claim 6, wherein said interlayer insulation film has a dielectric constant of 3.5.

13. Cancelled

14. (Previously amended) A method for forming a coating film, comprising the steps of:
applying a raw material of a low dielectric constant onto a surface of a plate-like material to be treated;

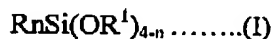
reducing oxygen concentration in the atmosphere surrounding the plate-like material to be less than or equal to 1% before a surface temperature of said plate-like material to be treated rises to 200°C; thereafter

heating said plate-like material to be treated to a temperature greater than or equal to 400°C; and then

maintaining the oxygen content in the atmosphere to be less than or equal to 1% until the

surface temperature of said plate-like material to be treated lowers to 200°C;

said raw material is an organic SOG obtained by hydrolyzing and condensing at least one alkoxysilane compound expressed by the following equation (I) into an organic solvent under an acid catalyst,



where R is an alkyl group or an aryl group having a carbon number of 1-4, , R¹ is an alkyl group having a carbon number of 1-4, and n is an integer of 0-2.

15. (Previously added) A method for forming a coating film as defined in claim 14, wherein said organic SOG is obtained by hydrolyzing and condensing at least one alkoxysilane compound expressed by the equation (I) in which $n=1$ or $n=2$ into an organic solvent under and acid catalyst.

16. (Previously added) A method for forming a coating film as defined in claim 14, wherein said organic SOG is obtained by hydrolyzing and condensing an alkoxysilane compound expressed by the equation (I) in which $n=1$ and an alkoxysilane compound expressed by the equation (I) in which $n=0$ into an organic solvent under an acid catalyst.

17. (Previously added) A method for forming a coating film as defined in claim 14, wherein said organic SOG is obtained by hydrolyzing and condensing an alkoxysilane compound expressed by the equation (I) in which $n=0$ and an alkoxysilane compound expressed by the equation (I) in which $n=1$ and an alkoxysilane compound expressed by the

equation (I) in which $n = 0$ into an organic solvent under an acid catalyst.

18. (Previously amended) A method for forming a coating film, comprising the steps of:

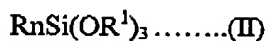
applying a raw material of a low dielectric constant onto a surface of a plate-like material to be treated;

reducing oxygen concentration in the atmosphere surrounding the plate-like material to be less than or equal to 1% before a surface temperature of said plate-like material to be treated rises to 200°C; thereafter

heating said plate-like material to be treated to a temperature greater than or equal to 400°C; and then

maintaining the oxygen content in the atmosphere to be less than or equal to 1% until the surface temperature of said plate-like material to be treated lowers to 200°C;

said raw material is an organic SOG obtained by hydrolyzing and condensing at least one alkoxysilane compound expressed by the following equation (II) into an organic solvent under an acid catalyst,



where R is an alkyl group or an aryl group having a carbon number of 1-4, and R^1 is an alkyl group having a carbon number of 1-4.

19. (Previously added) A method for forming a coating film as defined in claim 18, wherein said organic SOG comprises a ladder type condensation product.

20. (Previously added) A method for forming a coating film as defined in claim 14, wherein said raw material is an organic SOG obtained by hydrolyzing and condensing into an organic solvent under an acid catalyst the following:

one alkoxysilane compound expressed by the equation (I) where $n=1$; or

one alkoxysilane compound expressed by the equation (I) where $n=1$ and one alkoxysilane compound expressed by the equation (I) where $n=0$; or

one alkoxysilane compound expressed by the equation (I) where $n=1$, one alkoxysilane compound expressed by the equation (I) where $n=2$, and one alkoxysilane compound expressed by the equation (I) where $n=0$.

21. (Previously added) A method for forming a coating film as defined in claim 14, wherein said raw material is an organic SOG obtained by hydrolyzing and condensing into an organic solvent under an acid catalyst a monoalkyl trialkoxysilane compound expressed by the equation (I) where $n=1$ and a tetraalkoxysilane compound expressed by the equation (I) where $n=0$; and relative proportions of said compounds are 2.0-6.0 mols of said monoalkyl trialkoxysilane compound with respect to 1 mol tetraalkoxysilane compound.

22. (Previously added) A method for forming a coating film as defined in claim 14, wherein said raw material is an organic SOG obtained by hydrolyzing and condensing into an organic solvent under an acid catalyst a monoalkyl trialkoxysilane compound expressed by the equation (I) where $n=1$, a dialkyl dialkoxysilane compound expressed by the equation (I) where $n=2$, and a tetraalkoxysilane compound expressed by the equation (I) where $n=0$; and relative proportions of

said compounds are 0.5 – 4.0 mols of said tetraalkoxysilane compound and 0.5 – 4.0 mols of said monoalkyl trialkoxysilane compound with respect to 1 mol of said dialkyl dialkoxysilane compound.

23. (New) A method for forming a coating film as defined in claim 3, wherein prior to said reducing step, said the plate-like material is brought close to said cool plate.